

**United States Department of Energy**

**Savannah River Site**

## **Scoping Summary for the M Area Operable Unit (U)**

**DRAFT**

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## 1.0 PROJECT PHASE AND STATUS

This scoping summary supports the Post-Characterization Scoping Meeting for the M Area Operable Unit (MAOU). It reviews historical information and presents the findings of the field work that has been gathered to date prior to subjecting the data to the complete Remedial Investigation (RI) evaluation process. To the extent possible at this phase of the project, it provides an identification of problems, likely response actions, and uncertainties associated with the remaining Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) waste units and former facilities that have been identified as part of the MAOU scope. Changes in the technical understanding of the problems warranting action since Work Plan scoping are also documented.

The M Area Core Team first met for an Area Definition Scoping Meeting on January 19, 2005, and agreed upon the components of the MAOU project. Data needs and associated characterization requirements were discussed, and sampling and analysis plans were subsequently agreed upon in four Work Plan Scoping Meetings in 2005 (May 11, August 10, November 3, and December 13). In addition, a MAOU Status Update Meeting was held on March 1, 2006 to provide a preliminary review and status of the ongoing characterization efforts.

The Sampling and Analysis Plans presented and agreed upon in prior meetings, for each of the investigation areas, have been executed and no further data gaps have been identified by the project team. Most of the data collected by Soil and Groundwater Closure Projects (SGCP) has been received from the laboratory and loaded into a central database for more detailed evaluations. The Comparison of Radiological Measurement Systems study is complete and the results are used in this presentation. The project team is also in the process of loading data collected by Site Deactivation and Decommissioning (SDD) into the database. The data has not been subjected to the entire spectrum of RI protocols, but comparisons to relevant screening values and any other data correlations necessary to communicate the findings have been completed. The project team believes that the quantity and quality of data collected to date are sufficient to support a remedial decision for the MAOU: additional sampling is not recommended.

A further development since the Work Plan Scoping Meetings were held is that the United States Department of Energy (USDOE), United States Environmental Protection Agency (USEPA) and South Carolina Department of Health and Environmental Control (SCDHEC) formally agreed in January 2006 to increase the scope of the MAOU per the letter titled *Revised Scope of the M-Area Inactive Process Sewer Lines Operable Unit (081-M)*. In accordance with this agreement, the northern portions of the M-Area Inactive-Process Sewer Lines (MIPSL) are included in the MAOU scope since the vadose zone contamination associated with these sections of the MIPSL is co-located with the vadose zone contamination near and beneath the non-operating production facilities of M Area. The three Parties believe that better and more cost effective remedial decisions will be made by evaluating the remedial problems in M Area in this manner.

## 2.0 BACKGROUND

Savannah River Site (SRS) produced special nuclear materials for the Department of Defense between 1952 and 1988. An important step in the production cycle was the manufacture of fuel and target assemblies in M Area for the nuclear reactors. M Area consisted of three major production buildings (313-M, 320-M and 321-M) that began operation in the early 1950s and continued operation at various production levels until the late 1980s. In addition to the production facilities, two support laboratories (320-M and 322-M) were also located in this area. Two test reactor facilities were located to the south (305-A and 777-10A). These facilities each had a history of managing radioactive material.

The manufacturing processes in M Area consumed a large quantity of industrial cleaning solvents and water, and early practices were to discharge the spent solvents and water directly into the environment. Of the reported 3.5 million pounds of solvents discharged, approximately 2 million pounds were discarded to the M-Area Settling Basin

located south of M Area, via a process sewer line. The basin was closed with the installation of a protective cap in 1991 as required by the Resource Conservation and Recovery Act (RCRA) Closure Plan. The portion of the process sewer line outside of the former M Area fence leading to the basin was removed and placed in the basin as part of this closure.

A corrective action program for A/M Area vadose zone and groundwater has been in place for over a decade under the RCRA Part B Permit. The baseline technologies for removing contamination are soil vapor extraction (SVE) for the vadose zone sources and pump and treat for groundwater. Dynamic Underground Stripping (DUS) (steam heating) is currently used to address large volumes of solvents. Groundwater is not considered part of the scope for the MAOU. Groundwater contamination in the M Area is regulated by the SRS RCRA Part B Permit and addressed by the requirements of the M Area and Metallurgical Laboratory Hazardous Waste Management Facilities Groundwater Monitoring and Corrective Action agreements.

M Area is the second OU at SRS to be addressed under an area-wide remedial strategy. As part of this strategy, the facilities in the former M Area industrial area were consolidated into a single operable unit, the MAOU. The SRS will revise the Federal Facility Agreement (FFA) to include Deactivation and Decommissioning (D&D) Facilities and Area Operable Units. This information will be listed in Appendix C.4, D&D Facilities (or Remnants) that may Warrant Response Action, Appendix C.5, Area Operable Units, and Appendix K, D&D Facilities. Appendix K consists of Appendix K.1, D&D Facilities to be Decommissioned and K.2, D&D Facilities (or Remnants) that Require No Further Evaluation. Table 1 lists all the RCRA/CERCLA/Site Evaluation (SE) units and D&D facilities (or remnants) that are part of the MAOU. If the unit was a D&D facility (or remnant), then the D&D model and status are also listed in the table. Table 2 provides a list of the buildings/units that are not part of the MAOU as well as the rationale for this determination.

### 3.0 LAND USE

The area identified as part of the MAOU is located in the future industrial land use zone of SRS as defined by the Land Use Control Assurance Plan. This area will require institutional controls to restrict use due to the large area of vadose zone and groundwater contamination, including operation of remedial systems, and the identification of a large part of the area as an Underground Radioactive Management Area (URMA). It is reasonable to assume that the entire area will be limited to industrial use, and that portions of the area will have further restrictions.

### 4.0 M AREA OPERABLE UNIT INVESTIGATION AREAS

The investigation areas of the MAOU are located between: a) SRS Road D to the east and south, b) Road A-1A to the north, and c) the railroad spur and the historical M Area production fence line to the west. The areas include SE units and facilities that have been combined based on physical location and common problems warranting action (see Figure 1):

- § Production Area: 321-M (including Underground Sumps #001 and #002), 313-M, 320-M, 322-M, 340-M, and 324-M (including the northern portions of the MIPS L and associated feeder lines)
- § Liquid Effluent Treatment Facilities: 341-M, 341-1M, and 341-8M
- § Test Reactor Facilities: 305-A and 777-10A
- § Salvage Area: 740-A, 743-A, and 741-A

§ Warehouses: 330-M and 331-M

§ Miscellaneous Buildings

§ Electrical Transformers

#### **4.1 Production Area**

There were three major production facilities within M-Area: the Fuel Fabrication Facility (321-M); Slug Production Facility (313-M); and the Alloy Building (320-M). Production support facilities include: the Metallurgical Laboratory (322-M), the Vertical Press Building (324-M), and the Lab Waste Treatment Facility (340-M). The feeder lines leading to the MIPS� associated with these facilities as well as the northern portions of the MIPS� itself are also included in this investigation area. Supporting information for each facility (including feeder lines and portions of the MIPS� associated with each of the facilities) and status of the characterization activities are provided in Attachment A.

D&D of all of the buildings/facilities in the Production Area is complete. A summary (D&D Model, D&D Status) is provided in Table 1.

Solvent contamination is present in localized areas throughout the vadose zone in the Production Area. Historical radiological operations have contributed to radiological contamination on the surface, primarily in association with building slabs.

#### Problems Warranting Action

§ Radionuclides (uranium isotopes) are present at concentrations that indicate PTSM is present. These areas include 313-M (Autoclave Basement, Core Recovery Room), 321-M (slab surface), 322-M (Room 109 Sump, sludge in pipes under slab).

§ VOCs are present in the vadose zone at concentrations that exceed PTSM thresholds. This location includes 321-M (below Tube Cleaning Pit and MIPS� tie-in).

§ Radiological contaminants (uranium isotopes) at locations across the remaining slabs present a risk greater than 1E-06 to a future industrial worker. These areas include 313-M (preliminary risk estimate = 3E-04), 321-M (preliminary risk estimate = 1.7E-03) and 322-M (preliminary risk estimate = 1E-04).

§ VOCs are contaminant migration constituents of concern (COCs) present in slabs, sumps or vadose zone soils. These locations include 313-M, 321-M, 320-M, 322-M, and the MIPS� associated with each of these facilities.

#### Scope of the Problem Warranting Action

§ Building 313-M was 52,000 ft<sup>2</sup>; however, approximately 32,000 ft<sup>2</sup> was removed during D&D activities. The remaining portion of the slab has areas of fixed radiological contamination. Two areas (Cap Can Room and Core Cleaning Solvent Tank Pit) comprise approximately 2063 ft<sup>2</sup> and are sources of VOC contamination at concentrations which exceed preliminary contaminant

migration threshold concentrations. The Autoclave Basement, which contains radionuclide contaminated material exceeding PTSM thresholds, comprises an area of 2,400 ft<sup>2</sup>. Two sumps in the Core Recovery room, which contain uranium at concentrations exceeding PTSM thresholds, have a combined area of 280 ft<sup>2</sup>.

- § Building 321-M was 64,000 ft<sup>2</sup>. Approximately one-third of the building has been identified with radiological surface contamination. The Tube Cleaning Pit is 1180 ft<sup>2</sup> and a source of VOC contamination.
- § Building 320-M was 48,000 ft<sup>2</sup>. The Tube Cleaning Pit is 1140 ft<sup>2</sup> and is the source of VOC contamination.
- § Building 322-M was 12,800 ft<sup>2</sup>, although the uranium processing area covered only one-half of the facility. Portions of this area have fixed radiological surface contamination. There is between 2.2 to 32 kg of uranium-contaminated sludge (PTSM) in the pipes beneath the slab, and in the MIPS� connecting 322-M to Manhole 6A. The Room 109 Sump is approximately 26 ft<sup>2</sup> and has uranium isotopes above PTSM levels.
- § VOCs (e.g., trichloroethylene [TCE] and/or tetrachloroethylene [PCE]) are present in localized areas in the vadose zone that are contaminant migration COCs. These areas include portions of the MIPS� associated with 313-M, 321-M, 322-M, and 320-M.

#### Remedial Action Objectives

- § Remove or treat radionuclides exceeding PTSM criteria in slabs, sumps or pipelines to the extent practicable.
- § Remove or treat VOCs exceeding PTSM criteria in subsurface soils to the extent practicable.
- § Prevent surficial human exposure to radiological contaminants present on the building slabs that present a risk to a future industrial worker greater than 1E-06.
- § Prevent migration of COCs in the building slabs, sumps or vadose zone to groundwater above maximum contaminant levels (MCLs).

#### Likely Response Actions

- § No further action.
- § Institutional controls.
- § Soil cover or concrete cap to prevent surficial radiological exposure.
- § Limited concrete caps.
- § Excavation/disposal of PTSM.

- § Treatment of PTSM in the vadose zone.
- § Scabbling of the concrete slab.
- § Excavation/disposal of the concrete slab.
- § Grout sections of pipe containing PTSM.
- § Soil vapor extraction in vadose zone.
- § Treatment of VOCs on-unit.
- § Geosynthetic cover to prevent contaminant migration to groundwater.
- § Soil removal and off-site disposal.

#### Uncertainties

- § Formal evaluation of the data using the entire spectrum of RI protocols (e.g., contaminant migration modeling, risk assessment, data uncertainty evaluations) has not yet been completed. This impacts the identification of some of the problems warranting action, as well as the scope of these problems at this stage of the project. This uncertainty will be addressed by implementing the RI protocols and presenting the results to the Core Team at the Problem Identification Scoping Meeting.
- § It is uncertain whether VOCs in concrete can be directly treated due to limited porosity of concrete. This impacts the potential response actions for concrete. The project team believes the range of response actions currently identified is adequate to address the problem. Therefore, this uncertainty will be managed through the alternative analysis as part of the Corrective Measures Study / Feasibility Study (CMS/FS).

## **4.2 Liquid Effluent Treatment Facilities**

The Liquid Effluent Treatment Facilities (LETF) consisted of three main facilities: the Dilute Effluent Treatment Facility (DETF), Building 341-M; the Interim Treatment and Storage Facility (ITSF), Building 341-1M; and, the Vendor Treatment Facility (VTF), Building 341-8M. Supporting information for each facility and status of the characterization activities are provided in Attachment B.

The DETF, Building 341-M, was constructed in 1982 and received the production wastewater that formerly was discharged to the M-Area settling basins and outfalls. The DETF contained batch systems that processed wastewater by pH adjustment, precipitation and filtration. The ITSF, Building 341-1M, was constructed in 1985 to store and prepare production solids that were formerly disposed of in the low-level waste burial grounds. The VTF, Building 341-8M, was constructed in 1996 to convert the low-level mixed waste sludge from the ITSF into leach resistant solid glass gems.

D&D of all of the buildings/facilities in the LETF investigation area is complete. A summary (D&D Model, D&D Status) is provided in Table 1.

#### Problems Warranting Action

§ None expected.

#### Scope of the Problem Warranting Action

§ None expected.

#### Remedial Action Objectives

§ None expected.

#### Likely Response Actions

§ Institutional controls.

#### Uncertainties

§ Formal evaluation of the data using the entire spectrum of RI protocols (e.g., contaminant migration modeling, risk assessment, data uncertainty evaluations) has not yet been completed. This impacts the identification of some of the problems warranting action at this stage of the project. This uncertainty will be addressed by implementing the RI protocols and presenting the results to the Core Team at the Problem Identification Scoping Meeting.

### **4.3 Test Reactors**

There were two test reactor facilities in M-Area: the Test Pile Facility, Building 305-A; and the Site Utilities Office Facility, Building 777-10A. Supporting information and status of the characterization activities for each facility are provided in Attachment C.

The Test Pile Facility, 305-A, formerly known as 305-M, was originally used as a laboratory and reactor test facility with incidental office space. It was built in 1953. This building housed two reactors: the Test Pile Reactor and the Nuclear Test Gauge (NTG) Reactor.

The Site Utilities Office Facility, 777-10A, formerly known as the Physics Laboratory or Building 777-M, was built in 1953. The building was originally operated as the Physics Laboratory and housed four experimental reactors: the Process Development Pile Reactor, the Lattice Test Reactor, the Standard Pile Reactor, and the Sub-critical Experiment Reactor.

D&D of all of the buildings/facilities in the Test Reactors investigation area is complete. A summary (D&D Model, D&D Status) is provided in Table 1.

Problems Warranting Action

§ None expected.

Scope of the Problem Warranting Action

§ None expected.

Remedial Action Objectives

§ None expected.

Likely Response Actions

§ Institutional controls.

Uncertainties

§ Formal evaluation of the data using the entire spectrum of RI protocols (e.g., contaminant migration modeling, risk assessment, data uncertainty evaluations) has not yet been completed. This impacts the identification of some of the problems warranting action at this stage of the project. This uncertainty will be addressed by implementing the RI protocols and presenting the results to the Core Team at the Problem Identification Scoping Meeting.

#### **4.4 Salvage Area**

The Salvage Area consists of the 741-A Salvage Yard, the Salvage and Reclamation Building (740-A), and the Rigging Storage Facility (743-A). Supporting information and status of the characterization activities for each facility are provided in Attachment D.

The Salvage Yard was used for storage of construction materials and used transformers. The Salvage and Reclamation Building was utilized to house the administrative staff for the operation of the Salvage Yard. However, the building initially housed a reclamation operation. The Rigging Storage Facility operated as a sandblast facility until 1985 and was later used as an equipment and rigging storage area until 2004.

The Salvage Yard was a SE unit requiring investigation. Building 740-A, including ancillary facilities, and Building 743-A were decommissioned under the Integrated Sampling Model. D&D of all of the buildings/facilities in the Salvage Area investigation area is complete. A summary (D&D Model, D&D Status) is provided in Table 1.

Problems Warranting Action

§ 741-A surficial soils present a risk greater than 1E-06 (As, Cr, PCBs, PAHs, preliminary combined risk estimate = 5E-05) or a hazard quotient (HQ) greater than 1 (Pb, preliminary HQ estimate = 1.6) for the future industrial worker.

#### Scope of the Problem Warranting Action

- § The 741-A Salvage Yard covers an area of approximately 3.0 acres. The area of contamination is confined to the northern portion (approximately 1.5 acres).

#### Remedial Action Objectives

- § Prevent human exposure to contaminants present in the surface soil that present a risk/hazard to a future industrial worker greater than  $1E-06$  or  $HQ > 1$ .

#### Likely Response Actions

- § No further action.
- § Institutional controls.
- § Soil cover to prevent surficial exposure.
- § Excavation/consolidation/disposal of hot spots.

#### Uncertainties

- § Formal evaluation of the data using the entire spectrum of RI protocols (e.g., contaminant migration modeling, risk assessment, data uncertainty evaluations) has not yet been completed. This impacts the identification of some of the problems warranting action, as well as the scope of these problems, at this stage of the project. Results of the data evaluations implementing the RI protocols will be available for the Problem Identification Scoping Meeting.

### **4.5 Warehouses**

The 330-M Slug Warehouse and 331-M Core Storage Warehouse were used to store slugs of depleted uranium. The inventory of depleted uranium was removed prior to decommissioning. 330-M and 331-M were dismantled and removed during the summer of 2003. No radiological waste was generated during the dismantling of these buildings. The "Radiological Control Basis Radiological Release of 330-M and 331-M" document states: "Based on the process history, radiological history, source term's form, characteristics and containment, and regulatory requirements, the 330/331-M physical structure requires no radiological surveys for general site or public use."

Radiological Control surveyed the 330-M and 331-M pad and found no detectable results in the survey. The 330-M and 331-M facilities underwent D&D prior to the current FDE process. It was agreed that based on process history and the results of the radiological screening that each facility would follow the Simple Model. Therefore, these facilities did not require sampling. A summary (D&D Model, D&D Status) is provided in Table 1.

Problem Warranting Action

§ None.

Remedial Action Objective

§ None.

Scope of the Problem

§ None.

Likely Response Action

§ Institutional controls.

Uncertainties

§ None.

#### **4.6 Miscellaneous Buildings**

The facilities that have been decommissioned under the Simple Model are identified on Table 1. Therefore, these facilities did not require sampling.

Problem Warranting Action

§ None.

Remedial Action Objective

§ None.

Scope of the Problem

§ None.

Likely Response Action

§ No further action.

Uncertainties

§ None.

**4.7 Electrical Transformers**

Polychlorinated biphenyls (PCBs) were used at SRS in dielectric fluids in electrical equipment such as transformers. After the PCB Disposal Regulations were promulgated in 1978, the SRS conducted a comprehensive evaluation of PCB use. Detailed inventories of PCB-containing equipment were compiled. Where feasible, transformers with high concentrations of PCBs were replaced with non-PCB models. Other pieces of equipment were rendered non-PCB via treatment or a drain-and refill process. The equipment was subsequently tested to verify that it contained less than 50 ppm PCBs. In 1986, USEPA performed a detailed assessment of the SRS compliance with the Toxic Substances Control Act (TSCA) and found records of analysis, storage, and disposal of PCB materials to be in compliance. In 1995, SRS determined that all of the site's transformers and large capacitors that were regulated due to PCB content had been replaced or rendered non-PCB.

There are multiple electrical transformer pads located throughout M Area. Many of these transformer pads are included in the scope of major facility decommissioning. Each transformer is filled, or was previously filled, with mineral oil. However, historical records indicate that the transformers were switched from PCB oil to mineral oil in the 1980s. There are no records indicating a spill or release from the transformers while they were operated with PCB oil; therefore, no samples were collected during decommissioning.

Problem Warranting Action

§ None.

Remedial Action Objective

§ None.

Scope of the Problem

§ None.

Likely Response Action

§ No further action.

Uncertainties

§ None.

## 5.0 AREA OPERABLE UNIT STRATEGY

- § There is uncertainty as to whether facilities that will remain operational past the M Area OU date (e.g., M-1 Air Stripper) will be included in the completion documentation. The uncertainty will be managed through Core Team discussion.
  
- § The generic area completion schedule developed by the Area Completion Team (ACT) features a stand-alone Work Plan (WP) followed by characterization and then a combined Remedial Investigation/Feasibility Study (RI/FS) document. However, given the success with the implementation of the streamlined schedule for the MIPS L OU, the Core Team agreed in May, 2005 to pursue a similar strategy for the MAOU. A pre-characterization program to establish the nature and extent of contamination and support problem identification was established based on Core Team meetings. This program has been executed and will be followed by a combined WP/RCRA Facility Investigation (RFI)/RI/Baseline Risk Assessment (BRA) with CMS/FS. This strategy accelerates the remaining project schedule (including submittal of the MAOU ROD) over the baseline scenario. The actualized schedule is presented in Figure 2.

**Key Changes Table**

<b>Sections</b>	<b>Description of Change</b>	<b>Rationale for Change</b>
1.0	Changed focus of document from work plan scoping to post-characterization scoping. Included description of additional scope (northern portions of MIPS L).	Evolution of project phase.
2.0	Deleted information in text regarding specific units/buildings within scope of MAOU: referred to updated Tables 1 and 2.	Ease of reading; evolution of project phase.
4.0	Changed the term "subunits" to "investigation areas."	Subunits typically refer to the individual waste/facility units within an investigation area.
4.0	Updated the Problems Warranting Action, Scope of Problems Warranting Action, Remedial Action Objectives, Likely Response Actions and Uncertainties based on preliminary review of data and current technical understanding of the subunits in each investigation area, as appropriate. Included information on the M-Area Inactive Process Sewer Lines that were formerly part of the MIPS L OU.	Evolution of project phase.
5.0	Updated OU Strategy.	Evolution of project phase.
Tables 1 and 2	Updated information based on draft FFA and D&D status.	Evolution of project phase.
Appendices	Updated information on characterization activities.	Evolution of project phase.

**Significant Core Team Agreements**

<b>Agreement</b>	<b>Meeting</b>
The M Area OU will consist of the three remaining site evaluation units (Underground Sump 321-M #001, Underground Sump 321-M #002, and the 741-A Salvage Yard) and the remaining facilities within the M-Area Industrial Area. The M Area Industrial Area consists of the M-Area Production Area (MAPA) and the Site Support Area.	January 19, 2005 Scoping Meeting
The M-Area Inactive Process Sewer Line Operable Unit (MIPS L OU) will remain on its own path. However, the scope of the MIPS L OU remedial actions should consider similar	January 19, 2005 Scoping Meeting

problems identified as part of M Area OU.	
Operable units (including groundwater in A/M area) currently being addressed under corrective action as specified in the RCRA permits should remain with RCRA and will not be a part of the M Area ROD. This also applies to units (315-4M and 316-M) currently following a closure plan.	January 19, 2005 Scoping Meeting
The RCRA units that are listed in Appendix H of the FFA (315-4M and 316-M) will be incorporated in the M Area OU ROD.	May 11, 2005 Scoping Meeting
The Sampling and Analysis Plan for the 741-A Salvage Yard was approved.	May 11, 2005 Scoping Meeting
The Sampling and Analysis Plan for the 740-A Salvage and Reclamation Building was approved.	May 11, 2005 Scoping Meeting
The Sampling and Analysis Plan for the 305-A Test Pile Facility was approved.	May 11, 2005 Scoping Meeting
The Scoping Summary would be re-packaged to address Core Team concerns.	May 11, 2005 Scoping Meeting
The proposed administrative strategy was approved.	May 11, 2005 Scoping Meeting
The Sampling and Analysis Plan for 313-M was approved. A radiological correlation study using screening information (dpm), ISOCS, and volumetric data will be performed as part of the plan.	August 10, 2005 Scoping Meeting
The MIPSL from Manhole 6A to the 322-M facility will be included as part of the M Area OU. A cost analysis will be performed for potential early actions for the PTSM associated with sludge in the pipeline.	August 10, 2005 Scoping Meeting
The Sampling and Analysis Plan for 777-10A was approved.	August 10, 2005 Scoping Meeting
The feeder pipes from the buildings to MIPSL will be rolled into M Area. To be discussed more fully at a later date.	November 3, 2005 Scoping Meeting
The Sampling and Analysis Plan for 340-M was approved.	November 3, 2005 Scoping Meeting
No sampling is required for Building 324-M.	November 3, 2005 Scoping Meeting
The Sampling and Analysis Plan for the LETF was approved.	November 3, 2005 Scoping Meeting
The Sampling and Analysis Plan for 321-M was approved.	November 3, 2005 Scoping Meeting
The Sampling and Analysis Plan for 320-M was approved.	November 3, 2005 Scoping Meeting
The Sampling and Analysis Plan for the feeder lines leading to the MIPSL from Buildings 313-M, 320-M, 321-M, 322-M, and 777-10A was approved.	December 13, 2005 Scoping Meeting

The Sampling and Analysis Plan for the warehouses, simple models and electrical transformers was approved.	December 13, 2005 Scoping Meeting
The northern section of the MIPS L OU will be included in the M-Area OU. The Core Team believes that better and more cost effective remedial decisions will be made by evaluating these environmental problems together. A letter defining the MAOU scope will be submitted at a later date.	December 13, 2005 Scoping Meeting
USDOE letter from Hennessey to Gorman and Taylor, January 24, 2006, "Revised Scope of the M-Area Inactive Process Sewer Lines Operable Unit," Correspondence # SGCP-06-162.	Formally describes portions of MIPS L that are included in MAOU scope.
<p>Sampling status was provided and feedback was received on the 313-M, 320-M, 321-M, 330-M, 331-M, 741-A, 743-A and process sewer feeder line from 777-10A.</p> <p>At 313-M, process sewer feeder lines that were not located are assumed to have been removed and no further action is required.</p> <p>For 313-M, 320-M, 321-M, feeder line pipes were sampled and contained no visible residue; therefore samples were collected from soils adjacent to the pipes.</p> <p>The initial round of sample results for 741-A were discussed; re-sampling (sieving and step-out) strategy was approved.</p> <p>The 743-A sampling strategy was approved.</p> <p>The information on the process sewer feeder line at 777-10A provided by SDD and the soil sampling around the manhole as part of the MIPS L OU effort were discussed. It was agreed that manhole soil sample results and the SDD findings are representative of what could be within the feeder line; therefore excavation of the process sewer between the wall of the building and the manhole is not needed.</p>	March 1, 2006 Status Update Net Meeting

Table 1. MAOU RCRA/CERCLA/SE Units and D&D Facilities (or Remnants)

SRS Unit Number	Unit Name	D&D Model or Unit Type	D&D Status
<b>PRODUCTION AREA FACILITIES<sup>1</sup></b>			
326	Potential Release of TCT, PCE, TCE, HNO <sub>3</sub> , U, Heavy Metals From 321-M Abandoned Sewer Line, NBN	RCRA/CERCLA	N/A
465	Underground Sump 321 M #001	Site Evaluation	N/A
466	Underground Sump 321 M #002	Site Evaluation	N/A
1794	Canning Building (Slug Production Facility), 313-M	Integrated Sampling Model; Pre-FDE	Complete DPFR reference: V-PCOR-M-00014, R.0, 06/18/04
1799	Alloy Building, 320-M	Integrated Sampling Model; Pre-FDE	Complete DPFR reference: V-PCOR-M-00010, R.0, 03/30/04
1800	Manufacturing Building, 321-M	Integrated Sampling Model	Complete DPFR reference: V-PCOR-M-00025, R.1, 01/12/06
1801	Metallurgical Laboratory, 322-M	Integrated Sampling Model; Pre-FDE	Complete DPFR reference: V-PCOR-M-00009, R.2, 08/31/04
1803	Vertical Press Building, 324-M	Integrated Sampling Model	Complete DPFR reference G-PCOR-M-00002, R.2, 05/9/05
1805	Laboratory Waste Treatment Facility, 340-M	Integrated Sampling Model; Pre-FDE	Complete DPFR reference: V-PCOR-M-00006, R.2, 09/8/04

SRS Unit Number	Unit Name	D&D Model or Unit Type	D&D Status
<b>LIQUID EFFLUENT TREATMENT FACILITIES</b>			
1807	Tank Farm Containment Facility (Interim Treatment and Storage Facility), 341-1M	Integrated Sampling Model	Complete  DPFR reference: V-PCOR-M-00038, R.1, 01/10/06
1808	Vendor Treatment Facility, 341-8M	Integrated Sampling Model	Complete  DPFR reference: V-PCOR-M-00029, R.1, 10/26/05
1809	Dilute Effluent Treatment Facility, 341-M	Integrated Sampling Model	Complete  DPFR reference: V-PCOR-M-00002 R.0, 05/24/00
<b>TEST REACTOR FACILITIES</b>			
1000	Test Pile Facility, 305-A	Integrated Sampling Model	Complete  DPFR reference: V-PCOR-A-00052, R. 0, 12/29/05
1128	Site Utilities Office Facility (Physics Assembly Laboratory), 777-10A (including Gas Cylinder Storage Shed, 777-1A and Cylinder Storage Shed, 777-1M)	Integrated Sampling Model	Complete  DPFR reference: V-PCOR-A-00054, R.1, 05/04/06
<b>SALVAGE AREA</b>			
340	Salvage Yard, 741-A	Site Evaluation	N/A
1094	Salvage and Reclamation Building, 740-A (including PCB Storage Facility, 740-1A)	Integrated Sampling Model	Complete  DPFR reference: V-PCOR-A-00033, R.2, 5/3/05
1097	Rigging Storage, 743-A	Integrated Sampling Model	Complete  DPFR reference: V-PCOR-A-00009, R.0, 12/16/04

SRS Unit Number	Unit Name	D&D Model or Unit Type	D&D Status
<b>WAREHOUSES<sup>2</sup></b>			
1804	Core Storage Warehouse, 331-M	Simple Model; Pre-FDE	Complete  DPFR reference: V-PCOR-M-00008, R.0, 11/13/03
1806	Slug Warehouse, 330-M	Simple Model; Pre-FDE	Complete  DPFR reference: V-PCOR-M-00008, R.0, 11/13/03
<b>RCRA CLOSURE PLAN FACILITIES<sup>2</sup></b>			
1795	Hazardous Mixed Waste Storage Pad (M Area Pad), 315-4M	Integrated Sampling Model	Complete  DPFR reference: V-PCOR-M-00031, R.1, 12/6/05
1798	Drum Storage Facility (Mixed Waste Storage Shed), 316-M	Integrated Sampling Model	Complete  DPFR reference: V-PCOR-M-00032, R.1, 12/6/05
<b>MISCELLANEOUS BUILDINGS<sup>2</sup></b>			
1022	Janitorial Subcontract Office, 707-A	Simple Model	Transferred to Tri County Alliance for reuse
1047	Training School and Laboratories Building, 721-A (including Classroom Facility, 721-2A)	Simple Model	Complete  DPFR reference: V-PCOR-A-00022, R.0, 12/20/04
1057	T&T Storage Shed, 724-2A	Simple Model	Transferred to Tri County Alliance for reuse
1059	E&I Central Shop Office Complex, 724-A	Simple Model	Complete  DPFR reference: V-PCOR-A-00024, R.0, 12/20/04

SRS Unit Number	Unit Name	D&D Model or Unit Type	D&D Status
1093	Storage Building, 740-8A	Simple Model	Transferred to Tri County Alliance for reuse
1096	Vehicle Shed, 743-1A	Simple Model	Transferred to Tri County Alliance for reuse
1797	Chemical Storage Pad, 316-1M	Simple Model	Complete  DPFR reference: V-PCOR-M-00034, R.0, 10/24/05
1810	Electrical Storage Building (Formerly MS4), 363-1M	Simple Model	Complete  DPFR reference: V-PCOR-M-00012, R.1, 08/26/04
1811	Electrical Storage Building (Formerly MS5), 363-2M	Simple Model	Complete  DPFR reference: V-PCOR-M-00013, R.1, 08/26/04
1812	Main Gatehouse, 701-1M	Simple Model	Complete  DPFR reference: V-PCOR-M-00015, R.1, 07/13/04
1813	Harden Entry Control Facility to 321-M, 701-4M	Simple Model	Complete  DPFR reference: V-PCOR-M-00020, R.0, 09/28/04
1814	Area Administration and Services Building, 704-M	Simple Model	Complete  DPFR reference: V-PCOR-M-00021, R.1, 04/27/05
1815	Storage Building, 710-M	Simple Model	Complete  DPFR reference: V-PCOR-M-00010, R.0, 03/30/04

SRS Unit Number	Unit Name	D&D Model or Unit Type	D&D Status
1816	Engineering and Training Building, 730-M	Simple Model	Complete  DPFR reference: V-PCOR-M-00017, R.0, 6/29/04
2024	Guardhouse M-4, NBN	Simple Model	Complete  DPFR reference: V-PCOR-M-00010, R.0, 03/30/04
2031	Gatehouse Entrance to 777-10A (M-Area Gatehouse), 701-3M	Simple Model	Complete  DPFR reference: V-PCOR-M-00023, R.0, 6/2/05
	Storage Building, 341-5M	Simple Model; Pre-FDE	Complete  DPFR reference: N/A

Notes:

1. Includes associated feeder lines from the facilities leading to the MIPS L.
2. These facilities are expected to require no further evaluation.

**Table 2. Buildings/Units Not in the MAOU Scope**

SRS Unit Number	Unit Name	Unit Type	Rationale
12	M-Area Hazardous Waste Management Facility: Lost Lake	RCRA	RCRA Part B Permit Corrective Action Program
13	M-Area Hazardous Waste Management Facility: M-Area Settling Basin, 904-51G	RCRA	RCRA Part B Permit Corrective Action Program
23	M-Area Hazardous Waste Management Facility: A/M Area Groundwater Portion, 904-110G	RCRA	RCRA Part B Permit Corrective Action Program
484	M-Area Hazardous Waste Management Facility: M-Area Vadose Zone, 643-28G	RCRA	RCRA Part B Permit Corrective Action Program
100	M-Area Settling Basin Inactive Process Sewers To Manhole 1, 081-M	RCRA/CERCLA	MIPSL OU
234	313-M And 320-M Inactive Clay Process Sewers To Tims Branch, NBN (Southern Portion)	RCRA/CERCLA	MIPSL OU
128	Spill On 10/13/75 Of 1200 Gal Of PCE, NBN	Site Evaluation	Complete – No Further Action
187	M-Area Sandblast Area CMM-006	Site Evaluation	Complete - No Further Action
188	M-Area Sandblast Area CMM-007	Site Evaluation	Complete - No Further Action
189	M-Area Sandblast Area CMM-004	Site Evaluation	Complete - No Further Action
190	M-Area Sandblast Area CMM-005	Site Evaluation	Complete - No Further Action
195	Spill On 03/20/86 Of <1 Gal Of Water - Rad, NBN	Site Evaluation	Complete - No Further Action
196	Spill on 03/30/87 of 15 Gal of Acidic Water, NBN	Site Evaluation	Complete - No Further Action
197	Spill On 03/30/88 Of 15 Gal Of Acidic Water, NBN	Site Evaluation	Complete - No Further Action
215	Potential Release Of Caustic/HNO <sub>3</sub> From 312-M, NBN	Site Evaluation	Complete - No Further Action
322	Potential Release Of Diesel Fuel And Benzene From 730-M, NBN	Site Evaluation	Complete - No Further Action
347	Sandblast Area CMM-002, NBN	Site Evaluation	Complete - No Further Action

SRS Unit Number	Unit Name	Unit Type	Rationale
352	Sandblast Area CMM-008, NBN	Site Evaluation	Complete - No Further Action
369	Spill On 01/01/85 Of 3 Gal Of Aluminum Nitrate, NBN	Site Evaluation	Complete - No Further Action
371	Spill On 01/01/87 Of 5 Gal Of 50% Sodium Hydroxide, NBN	Site Evaluation	Complete - No Further Action
377	Spill On 01/19/86 Of Unknown Of Plating Solution, NBN	Site Evaluation	Complete - No Further Action
379	Spill On 01/07/87 Of 20 Gal Of Caustic, NBN	Site Evaluation	Complete - No Further Action
388	Spill On 12/17/85 Of 2 Gal Of Phosphoric Acid, NBN	Site Evaluation	Complete - No Further Action
397	Spill On 02/06/85 Of 50 Gal Of Caustic, NBN	Site Evaluation	Complete - No Further Action
400	Spill On 03/11/87 Of 1 Gal Of Caustic, NBN	Site Evaluation	Complete - No Further Action
404	Spill On 03/07/86 Of 10 Gal Of Acid, NBN	Site Evaluation	Complete - No Further Action
406	Spill On 03/08/86 Of 1/2 Pint Of Water - Rad, NBN	Site Evaluation	Complete - No Further Action
407	Spill On 03/08/86 Of 10 Gal Of Nitric Acid, NBN	Site Evaluation	Complete - No Further Action
408	Spill On 03/08/86 Of 6 Gal Of Caustic, NBN	Site Evaluation	Complete - No Further Action
415	Spill On 04/25/87 Of 15 Gal Of Water - Rad, NBN	Site Evaluation	Complete - No Further Action
420	Spill On 05/01/87 Of 100 Gal Of Water From 300-M, NBN	Site Evaluation	Complete - No Further Action
436	Spill On 06/16/87 Of ~1 Gal Of Water - Rad, NBN	Site Evaluation	Complete - No Further Action
440	Spill On 06/28/84 Of 100 Gal Of Chilled Water, NBN	Site Evaluation	Complete - No Further Action
446	Spill On 08/18/86 Of 20 Gal Of Water - Rad, NBN	Site Evaluation	Complete - No Further Action

SRS Unit Number	Unit Name	Unit Type	Rationale
447	Spill On 08/29/85 Of 500 Gm Of Uranyl Nitrate, NBN	Site Evaluation	Complete - No Further Action
450	Spill On 09/10/86 Of 1 Gal Of Water - Rad, NBN	Site Evaluation	Complete - No Further Action
451	Spill On 09/20/87 Of Unknown Amount Of Water - Rad, NBN	Site Evaluation	Complete - No Further Action
454	Spill On 09/04/85 Of 1 1/2 Gal Of Nitric Acid, NBN	Site Evaluation	Complete - No Further Action
480	Sandblast Area CMM-003, NBN	Site Evaluation	Complete - No Further Action
486	Contaminated Soil, 321-M	Site Evaluation	Complete - No Further Action
497	Sandblast Area CMM-001, NBN	Site Evaluation	Complete - No Further Action
521	ECODS A-2 (Near Sandblast Area CMM-001, NBN)	Site Evaluation	Complete - No Further Action
1045	Central Alarm Station (CAS)	N/A	Operational
1796	Essential Materials Warehouse, 315-M	N/A	Operational
1802	MCC For Groundwater Treatment, 323-M	N/A	Operational
1817	Pump House, 782-1M	N/A	Operational
	Sprinkler Alarm Valve House/Essential Material Warehouse, 315-1M	N/A	Operational
	Truck Scale House (SW Of Bldg. 719-A), 616-G	N/A	Operational
	Engineering Office Building, 705-A	N/A	Operational
	Storage Building, 724-11A	N/A	Operational
	Storage Building, 724-12A	N/A	Operational
	E&I Vehicle Storage Shed, 724-5A	N/A	Operational
	Storage Building, 724-6A	N/A	Operational
	Storage Building, 724-7A	N/A	Operational
	Storage Building, 724-8A	N/A	Operational

SRS Unit Number	Unit Name	Unit Type	Rationale
	Storage Building, 724-9A	N/A	Operational
	Water Storage Tank (782-M)	N/A	Operational
	Full Scale Production Air Stripper (906-1M)	N/A	Operational
	Sewage Lift Station, 607-1M	N/A	Operational

Figure 1. Investigation Areas for the MAOU

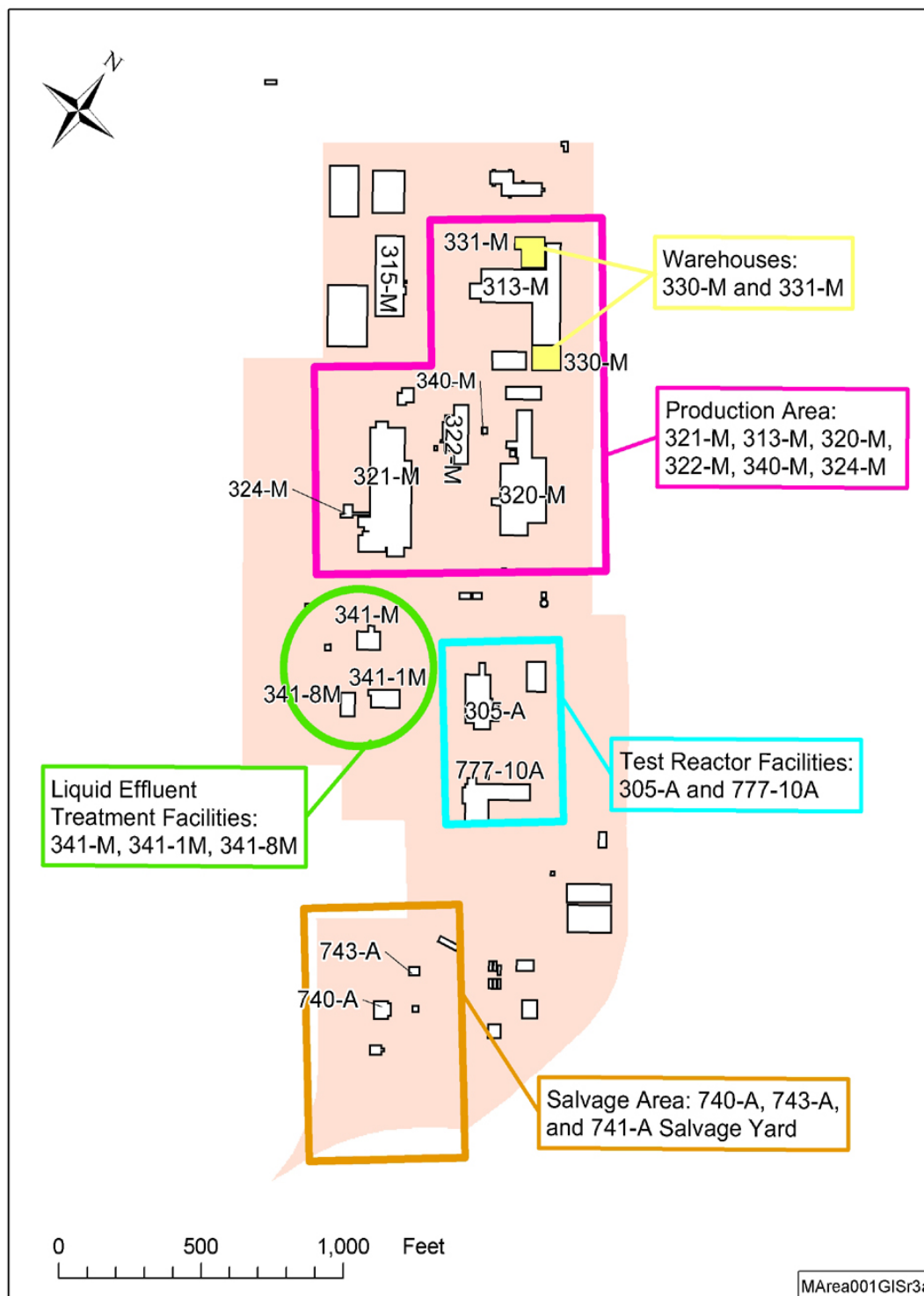


Figure 2. MAOU Strategy Schedule

